

BTEC Assignment Brief



Qualification	Pearson BTEC International Level 3 Diploma in Engineering Pearson BTEC International Level 3 Diploma in Manufacturing Engineering Pearson BTEC International Level 3 Extended Diploma in Engineering Pearson BTEC International Level 3 Extended Diploma in Manufacturing Engineering
Unit number and title	Unit 39: Modern Manufacturing Systems
Learning aim(s)	A: Understand the functions of manufacturing operations and factors influencing their success
Assignment title	An introduction to manufacturing operations
Assessor	
Issue date	
Hand in deadline	

Vocational Scenario or Context	Having worked for the same manufacturing company for three years as an engineering apprentice, your supervisor has asked you to help with the induction training for a group of new young apprentices that will join the company straight from school in a few weeks. It has been noticed in previous years that recruits with no industrial or other commercial experience have little or no knowledge about the different functions encompassed by 'operations' within a manufacturing company. Your supervisor has asked you to prepare a briefing document/report for the new recruits to fill in the gaps in their knowledge. The new recruits will be asked to read the report if it is of a good standard. This written report needs to be easily understandable by people with little previous engineering experience. It must also set a good example through the proper use of technical language and a high standard of English including accurate punctuation and spelling.
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Task 1	The written report should provide detailed information on: ● the importance of each of the operations functions in a manufacturing operation (such as manufacturing processes, maintenance, logistics , human resources etc) ● how a range of factors (such as health and safety, lead times, quality, dependability etc) relate to and influence the achievement of performance objectives for a manufacturing operation at a function level ● which factor is likely to have the greatest impact on the overall performance a manufacturing organisation ● the importance/impact of relevant social, economic or technological trends (such as additive manufacturing, energy security, sustainability etc) for a manufacturing operation, considering whether their impact on performance will be significant in the future and how a manufacturing operation might change as a result.
Checklist of evidence required	A written report containing the information stated above
Criteria covered by this task:	
Unit/Criteria reference	To achieve the criteria you must show that you are able to:
39/A.P1	Explain the functions of and factors affecting the performance of manufacturing operations and how these might change in the future.
39/A.M1	Analyse the functions of and factors affecting the performance of manufacturing operations and how these might change in the future.
39/A.D1	Evaluate, using language that is technically correct and of a high standard, the functions of and factors affecting the performance of manufacturing operations and how these might change in the future.
Sources of information to support you with this Assignment	Books Slack, Nigel, Alistair Brandon-Jones, and Robert Johnston. 2012. <i>Operations Management</i>. 7th ed. Harlow: Financial Times Prentice Hall. ISBN 9780273776208 Groover, Mikell P. 2012. <i>Fundamentals Of Modern Manufacturing</i>. 5th ed. Hoboken, NJ: John Wiley & Sons, Inc. ISBN 9781118231463 Websites Foresight. 2013. The Future of Manufacturing: A new era of opportunity and challenge for the UK Summary Report [Online]. London: The Government Office for Science. Available from: http://www.bis.gov.uk/foresight Above are some examples of websites. Further useful resources may be found at qualifications.pearson.com/en/support/published-resources.html#step1